



Figure 14.4 Exsolution lamellae may be responsible for partings in pyroxene. (a) Augite. Pigeonite may exsolve as lamellae roughly parallel to (001); the exact orientation depends on composition and temperature. The pigeonite converts to orthopyroxene with slow cooling. Primary orthopyroxene lamellae may exsolve parallel to (100). (b) Primary orthopyroxene (Bushveld type). Lamellae of augite develop parallel to (100) of the orthopyroxene. (c) Pigeonite. Augite lamellae may exsolve roughly parallel to (001). The exact orientation depends on temperature and composition. (d) Orthopyroxene converted from pigeonite (Stillwater type). Unless cooled rapidly, pigeonite converts to orthopyroxene. The “(001)” lamellae of augite in the original pigeonite are preserved, and additional lamellae of augite develop parallel to (100) of the orthopyroxene.